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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/857,570	09/17/2001	Cesar Anatolio Garcia Vidrio	P 281354	6336

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EXAMINER
KRECK, JOHN J

ART UNIT	PAPER NUMBER
3673	

DATE MAILED: 03/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/857,570	Applicant(s) VIDRIO ET AL.
	Examiner John Kreck	Art Unit 3673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8 and 10-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8 and 10-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 September 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

The preliminary amendments dated 9/17/01 and 1/22/02 have been entered.

Information Disclosure Statement

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Specification

2. The abstract of the disclosure is objected to because it includes the text "The invention describes...". Correction is required. See MPEP § 608.01(b).

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the part of the effluence taken from a chimney (claim 6) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-8, and 10-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

Claims 1-8, and 10-14 purport to be method claims ,but they fail to recite any positive method steps. Applicant uses verb phrases such as "injection" or "industrial effluences are subjected to...adsorption" in an attempt to define the method steps. The proper manner to properly claim method steps is to use gerunds or verbal nouns such as "injecting" or "subjecting industrial effluences to adsorption". Without positive recitation of the method steps, it is impossible to ascertain the scope of the claim.

Claims 1 and 8 are unclear regarding the "expenditure". "Expenditure" is not commonly considered to be a property of gases which can be adjusted in an industrial

process; the term is not defined by the claim, the specification does not provide support for what the meaning of this term is, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim 1 recites the limitation "the deposit" in line 10. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 is unclear as to its scope: does the claim include obtaining the effluences along with adsorption, etc...? Does the claim include injecting the inert gases into the hydrocarbon deposit? The claim has been interpreted as if it positively includes obtaining effluences, treating (adsorption, etc...) and injecting.

Claims 5 and 13 are unclear regarding the gas percentages. It is unclear whether this refers to the "inert gases" recited in claim 1, or whether the claim allows for gases other than N_2 or CO_2.

Claims 4, 10-12, and 14 are entirely unclear as to the "water and oxygen are recycled". It is not at all clear what the scope of this limitation is. Does this limitation apply only to water and oxygen from the effluences? Does this require a positive second use of the water and oxygen, or would separation of the water and oxygen without any further use meet this limitation?

Claim 6 is entirely unclear; it is not clear whether this requires the gas to be taken only after being discharged from a chimney ("effluences discharged from a chimney is taken...") also, it is not clear whether this requires flue gas from a chimney to be added to effluence from some other source; or whether it requires all of the effluence to be

taken from a chimney; the claim is further unclear regarding whether only N_2 or both CO_2 and N_2 are taken from the chimney.

Claim 7 is unclear regarding the fuels; does "alternative fuels" include only tires and wood? Does the phrase "combinations thereof" apply to the tires and wood, or to the fossil fuel and alternative fuels?

Claim 8 is unclear as to its scope: does the claim include obtaining the effluences along with adsorption, etc...? Does the claim require that calcining gas be used? (the claim unequivocally states "combustion and/or calcining", but it is not clear how the use of combustion gases only would result in the reducing the contamination of clinker) Does the claim include injecting the inert gases into a hydrocarbon deposit? The claim has been interpreted as if it positively includes obtaining effluences, treating (adsorption, etc...) and injecting.

5. It is noted that the claims are extremely indefinite and difficult to comprehend; however, insofar as they can be understood, they have been rejected below:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-3, and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Martin, et al. (U.S. Patent number 4,546,829).

Martin (see col. 3, lines 12-22) teaches obtaining effluences ("combustion gases", line 15); subjecting them to separation of dusts ("removing particulate" line 16); adjusting temperature ("controlled temperatures and pressure" line 19); and injecting into a hydrocarbon deposit as called for in claim 1.

Martin also teaches the combustion gases as called for in claim 2.

Martin also teaches the mixture of N_2 and CO_2 as called for in claim 3.

Martin also teaches the fossil fuel (col. 3, lines 32) as called for in claim 7.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 5, 6, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin in view of Shayegi, et al. (U.S. Patent number 5,725,054).

Martin teaches all of the limitations of claim 3, from which these claims depend.

Martin teaches that the gases may be injected in "selected mixtures" (col. 3, line 18) but fails to explicitly disclose the 75% to 85% N_2 and 15%-25% CO_2 called for in claim 5.

Shayegi teaches that combustion gases used for oil recovery typically has nitrogen mixed with 10%-20% CO_2 (col. 2, lines 21-24). The 20% CO_2 is in the middle of the claimed range. See also table 3, which cites examples of 25% CO_2 (run #195, 196) It is apparent that this mixture is effective for oil recovery.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have practiced the Martin method with a gas having 75% to 85% N_2 and 15%-25% CO_2 as called for in claim 5, and as taught by Shayegi, in order to effectively recover oil.

With regards to claim 6; Martin fails to teach a chimney. Shayegi teaches the use of effluences discharged from a chimney ("flue gas") for oil recovery. It is apparent that flue gas is an inexpensive source of gas for oil recovery (since it is essentially a waste product). It would have been obvious to one of ordinary skill in the art at the time of the invention to have practiced the Martin process with augmenting the injection gas with effluences discharged from a chimney, as called for in claim 6, in order to reduce costs.

Martin teaches that the gases may be injected in "selected mixtures" (col. 3, line 18) but fails to explicitly disclose the 75% to 85% N_2 and 15%-25% CO_2 called for in claim 13.

Shayegi teaches that combustion gases used for oil recovery typically has nitrogen mixed with 10%-20% CO_2 (col. 2, lines 21-24). The 20% CO_2 is in the middle of the claimed range. See also table 3, which cites examples of 25% CO_2 (run #195, 196) It is apparent that this mixture is effective for oil recovery.

It would have been further obvious to one of ordinary skill in the art at the time of the invention to have practiced the Martin method with a gas having 75% to 85% N_2 and 15%-25% CO_2 as called for in claim 13, and as taught by Shayegi, in order to effectively recover oil.

8. Claims 4, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin in view of Puri (U.S. Patent number 5,133,406).

Martin teaches all of the limitations of claims 1, 2, and 3; from which these claims depend. Martin fails to explicitly disclose the recycling of oxygen and water.

Puri teaches that in a similar process, it is desirable to recycle oxygen (col. 3, lines 57-65) and water (col. 4, line 38-40) in order to eliminate unneeded components from the injection gas.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have practiced the Martin process with recycling of oxygen and water, as taught by Puri, and as called for in claims 4 and 10, in order to eliminate unneeded components from the injection gas.

9. Claims 11, 12, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin and Shayegi, et al. as applied to claims 5, 6, and 13 above, and further in view of Puri (U.S. Patent number 5,133,406).

Martin and Shayegi teach all of the limitations of claims 5, 6, and 13; from which these claims depend. Martin fails to explicitly disclose the recycling of oxygen and water.

Puri teaches that in a similar process, it is desirable to recycle oxygen (col. 3, lines 57-65) and water (col. 4, line 38-40) in order to eliminate unwanted components from the injection gas.

It would have been further obvious to one of ordinary skill in the art at the time of the invention to have practiced the Martin process (as modified in view of Shayegi) with recycling of oxygen and water, as taught by Puri, and as called for in claims 11, 12, and 14, in order to eliminate unneeded components from the injection gas.

10. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kupper, et al. (U.S. Patent number 5,219,544) in view of.

Kupper (see abstract) teaches a process for reducing contamination in cement clinker production including the steps of obtaining effluences from combustion or calcining gases; and subjecting the effluences to adsorption. Kupper teaches the effluences are then discharged to the atmosphere, and thus fails to explicitly disclose the adjusting temperature, concentration, or pressure and utilizing them for recovering hydrocarbons.

Martin teaches the use of combustion gases for injection into wells for oil recovery. Martin teaches the steps of adjusting temperature, concentration, or pressure and utilizing them for recovering hydrocarbons (col. 3, lines 15-22). It is readily

apparent that the use of combustion products for hydrocarbon recovery is advantageous, because it provides a use for a waste product.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the Kupper process to have included the steps of adjusting temperature, concentration, or pressure and utilizing them for recovering hydrocarbons as called for in claim 8, in order to recover oil.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Kreck whose telephone number is (703)308-2725. The examiner can normally be reached on M-F 6:00 am - 3:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Shackelford can be reached on (703)308-2978. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-3597 for regular communications and (703)305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)306-4177.

John Kreck
Examiner
Art Unit 3673

JJK
February 27, 2003